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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,645	08/05/2003	Jianzhou Wu	0425-1067P	5831

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EXAMINER

FELTON, AILEEN BAKER

ART UNIT PAPER NUMBER

1755

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,645

Applicant(s)

WU ET AL.

Examiner

Aileen B. Felton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 5, 11-13, 16, 17, 19-22, and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 14, 15, 18, 23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species in the reply filed on 5/25/2006 is acknowledged.
2. Claims 5, 11-13, 16, 17, 19-22, and 24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/25/2006.

Claim Objections

3. Claim 26 is objected to because of the following informalities: In line 1 of this claim, "molder" should be changed to "molded". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 8-10, 23, and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by (6,132,537).

Zeuner discloses gas generating composition that comprises a fuel from 20-60 % of melamine, cyanuric acid and their salts and derivatives, an oxidizer such as basic

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copper nitrate from 10-50 %, and metal oxides (col. 2, lines 1-20 and 53-56, and claim 1).

6. Claims 1-4, 6-10, 23, and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Scheffee et al (5,861,571).

Scheffee discloses a composition with a melamine and cyanuric acid derivative, cellulose binders, hydroxides (col. 4) and ammonium perchlorate (col. 3). The amounts are shown in col. 2 and col. 4 as well as in the Table.

7. Claims 1-4, 7, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Blount (6,054,515).

Blount discloses a composition comprising a thermoplastic resin (binder) (col. 5), a metal-containing compound such as metal oxides or aluminum hydroxide (col. 7), and a filler such as melamine cyanurate (see claim 5).

Claim Rejections - 35 USC § 103

8. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeuner (6,132,537) as applied above, in view of Zhou (6,468,369) or Matsuda (5,780,767).

The composition also includes typical processing aids but not the specific binder.

Both Zhou and Matsuda teach the use of sodium carboxymethylcellulose in col. 4, lines 25-35 and col. 3, lines 4-6, respectively.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the odium carboxymethylcellulose taught by Zhou or Matsuda into the composition of Zeuner since both Zhou and Matsuda disclose that it is a known binder for gas generating compositions.

9. Claim 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeuner (6,132,537) in view of Zhou (6,468,369) or Matsuda (5,780,767) as applied above, and further in view of Hinshaw et al (5,970,703).

Hinshaw et al teaches the use of aluminum hydroxide as a coolant in a gas generating composition.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coolant as taught by Hinshaw with the composition disclosed by Zeuner, Zhou, and Matsuda since Hinshaw suggests that it is useful as an additive for gas generating compositions.

10. Claims 1-4, 6-10, 14, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (6,505,562) in view of Taylor et al (6,096,147).

Wu discloses a gas generating composition that comprises a fuel which can be a mixture of melamine derivatives and sodium carboxymethylcellulose in amount from 3-40 % (col. 3 and 4). The composition also includes additives such as cobalt oxide and an oxidizer from 30-94 %; however, the specific oxidizer is not disclosed.

Taylor teaches the known use of basic copper nitrate in a gas generating composition with a carboxymethylcellulose binder (col. 5, lines 1-30).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the basic copper nitrate taught by Taylor into the composition of Wu since Taylor suggest that both basic copper nitrate and ammonium nitrate can be used and since Wu is using ammonium nitrate as the oxidizer. In the alternative, it is prima facie obvious to combine two compositions, each taught for the same purpose to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, i69 USPQ 423.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (6,505,562) in view of Taylor et al (6,096,147) as applied above and further in view of Hinshaw et al (5,970,703).

Hinshaw et al teaches the use of aluminum hydroxide as a coolant in a gas generating composition.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coolant as taught by Hinshaw with the composition disclosed by Wu and Taylor since Hinshaw suggests that it is useful as an additive for gas generating compositions.

12. Claims 1-4, 6-10, 14, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al (6,096,147) in view of Khandhadia et al (6,210,505).

Taylor discloses a gas generating composition that comprises basic copper nitrate with a carboxymethylcellulose binder and additives(col. 5, lines 1-30). The fuels include tetrazoles, cyanamide etc, but the specific fuel is not disclosed.

Khandhadia teaches a variety of fuels used in gas generating compositions and includes azines such as melamine, tetrazoles, and amides.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the melamine as taught by Khandhadia into the composition of Taylor since Khandhadia suggests that the fuel is useful in gas generating composition and equates melamine to other tetrazoles and amide fuels and also since Taylor discloses that a variety of fuel materials can be used.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al (6,096,147) in view of Khandhadia et al (6,210,505) as applied above, and further in view of Hinshaw et al (5,970,703).

Hinshaw et al teaches the use of aluminum hydroxide as a coolant in a gas generating composition.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coolant as taught by Hinshaw with the composition disclosed by Taylor and Khandhadia since Hinshaw suggests that it is useful as an additive for gas generating compositions.

Claim Rejections - 35 USC § 112

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 1-4, 6-10, 14, 15, 18, 23, and 25-27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 2 use

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the phrase "if required", this is indefinite because it does not allow one to be clear of the boundaries of the claims or what the claims require.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aileen B. Felton whose telephone number is 571.272.6875. The examiner can normally be reached on Monday-Friday 6:30-4:00, except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571.272.1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AILEEN FELTON
PRIMARY EXAMINER